L Number	Hits	Search Text	DB	Time stamp
2	0	(carbohydrate near8 (modified or deriva$5) near15 aglycon) same (partic$5 or gold or silica or chip or sensor)	USPAT; EPO; DERWENT	2004/05/17 09:06
1	5	carbohydrate near8 (modified or deriva$5) near15 aglycon	USPAT; EPO; DERWENT	2004/05/17 09:08

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COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 0.21 0.21

FILE 'AGRICOLA' ENTERED AT 09:09:15 ON 17 MAY 2004

FILE 'BIOTECHNO' ENTERED AT 09:09:15 ON 17 MAY 2004

FILE 'CONFSCI' ENTERED AT 09:09:15 ON 17 MAY 2004

FILE 'HEALSAFE' ENTERED AT 09:09:15 ON 17 MAY 2004

FILE 'IMSDRUGCONF' ENTERED AT 09:09:15 ON 17 MAY 2004

FILE 'LIFESCI' ENTERED AT 09:09:15 ON 17 MAY 2004

FILE 'MEDICONF' ENTERED AT 09:09:15 ON 17 MAY 2004

FILE 'PASCAL' ENTERED AT 09:09:15 ON 17 MAY 2004

=> carbohydrate(6A)(derivative or derivatized or derivatization or
modification)(12A)aglycon
L1 0 FILE AGRICOLA
L2 1 FILE BIOTECHNO
L3 0 FILE CONFSCI
L4 0 FILE HEALSAFE
L5 0 FILE IMSDRUGCONF
L6 0 FILE LIFESCI
L7 0 FILE MEDICONF
L8 0 FILE PASCAL

TOTAL FOR ALL FILES
L9 1 CARBOHYDRATE(6A)(DERIVATIVE OR DERIVATIZED OR DERIVATIZATION OR
MODIFICATION)(12A) AGLYCON

=> d l2 ibib abs total

L2 ANSWER 1 OF 1 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1984:14077845 BIOTECHNO
TITLE: Binding of simple carbohydrates and some of their chromophoric derivatives to soybean agglutinin as followed by titrimetric procedures and stopped flow kinetics
AUTHOR: De Boeck H.; Lis H.; Van Tilbeurgh H.; et al.
CORPORATE SOURCE: Laboratory of Biochemistry, Faculty of Sciences, State University of Gent, Gent, Belgium.

SOURCE: Journal of Biological Chemistry, (1984), 259/11 (7067-7074)
CODEN: JBCHA3
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
AN 1984:14077845 BIOTECHNO
AB The number of carbohydrate-binding sites of the GalNAc-specific lectin is four per tetramer. The binding parameters of N-acetyl-D-galactosamine and methyl-N-acetyl-α-D-galactosaminide, were determined by titrating the perturbation in the absorption spectrum of the protein. For D-galactosides, it was necessary to use p-nitrophenyl-N-acetyl-β-D-galactosaminide as an indicator in substitution titrations. The association constants K were determined at several temperatures yielding 2.4 x 10.sup.4 M.sup.-.sup.1 at 25°C with ΔH°' = -45 kJ mol.sup.-.sup.1 and ΔS° ' = -67 J.midldot.K.sup.-.sup.1 mol.sup.-.sup.1 for methyl-N-acetyl-α-D-galactosaminide and 1.0 x 10.sup.3 M.sup.-.sup.1 at 25°C, ΔH°' = -38 kJ mol.sup.-.sup.1 and ΔS°' = -69 J.midldot.K.sup.-.sup.1 mol.sup.-.sup.1 for methyl-α-D-galactoside. The increase in K by a factor of 25 caused by the acetamido group is largely enthalpic. Whenever different methods were used to determine the association constant of a given compound, the agreement was excellent. The observed changes in absorption of fluorescence of all chromophoric **carbohydrate derivatives** used are specific for the binding of carbohydrates. For large aromatic β- **aglycons** such as p-nitrophenyl or 4-methylumbelliferyl groups, the increase in K of the N-acetyl-D-galactosaminide moiety is by a factor of 2 or less, but for a large N-5-dimethylaminonaphthalene-1-sulfonyl (dansyl) group this factor is about 20 as compared with the acetyl group. The concomitant 10-fold increase in dansyl fluorescence, also observed with four other GalNAc-binding lectins together with a favorable and large ΔS°' = +60 J.midldot.K.sup.-.sup.1 mol.sup.-.sup.1 strongly point at the presence of a hydrophobic region in the vicinity of the carbohydrate-binding site. The results of stopped flow kinetics with 4-methylumbelliferyl-N-acetyl-β-D-galactosaminide and the lectin are consistent with a simple mechanism for which k.sub.+ = 1.1 x 10.sup.4 M.sup.-.sup.1 s.sup.-.sup.1 and k.sub.- = 0.4 s.sup.-.sup.1 at 25° C. The k.sub.- is slower than for any monosaccharide-lectin complex reported so far.

=> file .chemistry

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	8.48	8.69

FILE 'CAPLUS' ENTERED AT 09:11:15 ON 17 MAY 2004

FILE 'BIOTECHNO' ENTERED AT 09:11:15 ON 17 MAY 2004

FILE 'COMPENDEX' ENTERED AT 09:11:15 ON 17 MAY 2004

FILE 'ANABSTR' ENTERED AT 09:11:15 ON 17 MAY 2004

FILE 'CERAB' ENTERED AT 09:11:15 ON 17 MAY 2004

FILE 'METADEX' ENTERED AT 09:11:15 ON 17 MAY 2004

FILE 'USPATFULL' ENTERED AT 09:11:15 ON 17 MAY 2004

=> carbohydrate(6A)(derivative or derivatized or derivatization or modification)(12A)aglycon
L10 3 FILE CAPLUS
L11 1 FILE BIOTECHNO
L12 0 FILE COMPENDEX
L13 0 FILE ANABSTR
L14 0 FILE CERAB
L15 0 FILE METADEX
L16 2 FILE USPATFULL

TOTAL FOR ALL FILES
L17 6 CARBOHYDRATE(6A)(DERIVATIVE OR DERIVATIZED OR DERIVATIZATION OR MODIFICATION)(12A) AGLYCON

=> l17 and (particle or particulate or gold or silica or chip or sensor)
L18 1 FILE CAPLUS
L19 0 FILE BIOTECHNO
L20 0 FILE COMPENDEX
L21 0 FILE ANABSTR
L22 0 FILE CERAB
L23 0 FILE METADEX
L24 2 FILE USPATFULL

TOTAL FOR ALL FILES
L25 3 L17 AND (PARTICLE OR PARTICULATE OR GOLD OR SILICA OR CHIP OR SENSOR)

=> d l25 ibib abs total

L25 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1964:432785 CAPLUS
DOCUMENT NUMBER: 61:32785
ORIGINAL REFERENCE NO.: 61:5747h,5748a-g
TITLE: Olivomycin. I. Methanolysis
AUTHOR(S): Berlin, Yu. A.; Esipov, S. E.; Kolosov, M. N.; Shemyakin, M. M.; Brazhnikova, M. G.
CORPORATE SOURCE: U.S.S.R. Acad. Sci., Moscow
SOURCE: Tetrahedron Letters (1964), (21-22), 1323-8
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB (Rf values were determined by paper chromatography on Whatman number 2 paper in 4:1:5 BuOH-EtOH-H2O). From Streptomyces olivoreticuli was isolated an antibiotic mixture and given the name "olivomycin" (CA 60, 11851e; Gauze, et al., CA 60, 9629b.) This mixture separated by chromatography on **silica** gel and countercurrent distribution (400 transfers in the system 10:14:10:13 EtOH-EtOAc-hexane-H2O) gave 60-5% principal antibiotic of this complex, designated further as olivomycin (I), m. 160-5° (EtOAc-hexane), [α]25D -35.5° (c 0.5, EtOH), Rf 0.85, which underwent almost no change on addition of acid or alkali, mol. weight (determined thermoelec. in EtOAc) 1250-1350. To I was ascribed formula C61-5H90-8O27-9, on the basis of its mol. weight and elementary analysis. Based on a mol. weight of 1300, I was found to contain 2 MeO groups, 8 MeC groups, 13 active H atoms, and 3 O-acyl groups, the latter being formyl (9.3 p.p.m.), acetyl, and isobutyryl. I refluxed 3 hrs. in 0.1N

MeOH-H2SO4 gave several **carbohydrate derivs**. and an **aglycon**, called olivin (II), C19-21H22-4O9-10, m. 189-91° (EtOAc-C6H5 or EtOH-CHCl3-hexane), [α]25D 60.5° (c 0.5, EtOH). Functional analysis and the nuclear magnetic resonance (n.m.r.) spectrum of II indicated the presence of 5-6 active H atoms, MeO (δ 3.35 p.p.m.), MeCH group (doublet at 1.3 p.p.m.), and a proton which should be in a cyclopropane ring (n.m.r. multiplet at 1.0 p.p.m.). II contained no low mol. weight O-acyl groups. On acetylation (Ac2O-C5H5N, 24 hrs. at 20°), II was converted into an acetate (III), C31-3H34-6O15-16, m. 200-2° (CHCl3-EtOAc), [α]22D -7.3° (c 1.3, CHCl3). III contained 6 Ac groups (several peaks of 18 protons overall intensity in the range 2.0-2.5 p.p.m.), some of which were bound to an aromatic ring through O; possibly conversion of II to III may involve C-alkylation or addition of AcOH. From the mixture of carbohydrate derivs. obtained in the methanolysis of II, several components were isolated by absorption chromatography on Al2O3, the most important being derivs. of 3 sugars called olivomycose (IV), olivomose (V), and olivose (VI). Of these compds., the highest chromatographic mobility was displayed by 2 substances of composition C12H22O5, which proved to be anomeric Me glycosides of O-isobutyrylolivomycose, namely, Me O-isobutyrylolivomycoside A (VII), [α]25d -123° (c 0.6, EtOH), and Me O-isobutyrylolivomyeoside B (VIII), [α]25D 29° (c 1.5, EtOH). Saponification of VII and VIII by 0.4N aq.alc.-NaOH (4 hrs. at 20°) gave Me2CHCO2H (anilide m. 104-5°) and 2 Me olivomycosides, C8H16O4 [Me olivomycoside A, [α]22D -147° (c 1.0, EtOH), Rf 0.77], and Me olivomycoside B, m. 93-4° (hexane), [α]23D 50° (c 1.0, EtOH), Rf 0.73, which on hydrolysis with 0.2N H2SO4 gave IV, C7H14O4, m. 103-6° (Me2COEt2O), [α]26D -13° (immediate) and -22° (after 20 min. and 1.5 hrs.) (c 1.1, H2O), containing 3 OH groups (including the glycoside OH) and 2 C-Me groups. Evidently, IV was a branched-chain trideoxyheptose, C5H5O(Me)2(OH)3. Two other carbohydrate products of the methanolysis of II were anomeric Me olivomosides, C8H16O4, which contained an OH, MeO, and MeCH group besides the glycoside MeO. Me olivomoside A (IX), m. 98° (hexane), [α]26D 150° (c 0.4, EtOH); Me olivomoside B (X) m. 152-3° (hexane), [α]26D -37.5° (c 0.4, EtOH). Acid hydrolysis of IX and X gave V, C7H14O4, m. 158-62° (Me2CO), [α]23D 98.5° (immediate) and 89° (after 1 and 1.5 hrs.) (c 0.5, H2O), Rf 0.65. V did not undergo HIO4 oxidation and, in view of its other properties, was assigned structure 2,6-dideoxy-4-O-methyl-D-hexose; IX and X were α- and β-Me glycosides, resp. Another pair of carbohydrate methanolysis products were the Me olivosides, C7H14O4, which contained a MeCH group (δ1.2 p.p.m.) and 2 vicinal OH groups (consumption of 1 mole NaIO4). Only Me olivoside A (XI), [α]25D 131° (c 0.75, EtOH), Rf 0.75, was isolated in the pure state. Me olivoside B (XII), Rf 0.72, was contaminated with XI. XI was converted by MeOH-HCl into a mixture of XI and XII. Hydrolysis of XI and XII gave VI, C6H12O4, [α] 26D 45° (C 0.5, H2O), Rf 0.54. On the basis of chemical properties and its spectrum, VI was assigned structure 2,6-dideoxy-D-hexose. Acid hydrolysis of I (0.1N H2SO4 in aqueous THF at 75°) gave II and a mixture of carbohydrates, containing among other compds., IV (together with Oisobutyrylolivomycose), V, and VI. However, because of the lability of free deoxy sugars under hydrolytic conditions, this degradation was less convenient than methanolysis. It was concluded that I consisted of the aglycon II and deoxy sugar residues, at least partly bound by phenolic or enolic glycoside bonds. Infrared and ultraviolet data are given.

L25 ANSWER 2 OF 3 USPATFULL on STN
ACCESSION NUMBER: 2001:144135 USPATFULL
TITLE: Immobilized carbohydrate biosensor
INVENTOR(S): Nilsson, Kurt, Lund, Sweden
Mandenius, Carl-Fredrik, Huddinge, Sweden

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001017270	A1	20010830
APPLICATION INFO.:	US 2001-766659	A1	20010123 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-356229, filed on 19 Dec 1994, GRANTED, Pat. No. US 6231733 Continuation of Ser. No. WO 1994-SE343, filed on 18 Apr 1994, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	SE 1993-1270	19930417

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: SMITH GAMBRELL & RUSSELL, L.L.P., Suite 800, 1850 M Street, N.W., Washington, DC, 20036
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
LINE COUNT: 344
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention refers to a biosensor in which an immobolized carbohydrate or a derivative thereof is used to generate a detectable signal when a protein, a virus or a cell is bound to the carbohydrate surface. The **sensor** is an optical **sensor**, a piezoelectric **sensor**, an electrochemical electrode or a thermistor. A method of binding carbohydrates to a **gold** surface is also described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 3 OF 3 USPATFULL on STN
ACCESSION NUMBER: 2001:70970 USPATFULL
TITLE: Immobilized carbohydrate biosensor
INVENTOR(S): Nilsson, Kurt, Andjaktsv. 6, S-226 53, Lund, Sweden
Mandenius, Carl-Fredrik, Stromkarlsv. 36, S-141 42, Huddinge, Sweden

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6231733	B1	20010515
APPLICATION INFO.:	US 1994-356229		19941219 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1994-SE343, filed on 18 Apr 1994, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	SE 1993-1270	19930417

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Chin, Christopher L.
ASSISTANT EXAMINER: Nguyen, Bao-Thuy L.
LEGAL REPRESENTATIVE: Smith, Gambrell & Russell, L.L.P.
NUMBER OF CLAIMS: 58
EXEMPLARY CLAIM: 1
LINE COUNT: 496
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A biosensor in which a carbohydrate or a derivative of a carbohydrate is used to generate a detectable signal by way of the specific binding to a protein, a virus or a cell.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.